

Abstract

**Test structure for electrically verifying the depths of trench-  
etchings in an SOI wafer, and associated working methods**

5 The aim of the invention is to discover a simple to implement and reliable recognition of  
the moment at which insulation trenches reach the buried insulating layer during an etch  
process. The technological reliability during the etching of these trenches should be  
increased, the production of refuse should be prevented, and costs should be reduced.  
10 To these ends, the invention provides a test structure for verifying an insulation trench  
etching in an SOI wafer. After an etching of insulation trenches, this test structure has a  
row of connected islands, whereby each island is surrounded by a trench. This trench  
has a different width from island to island (A, B; B, C) while including a trench width that  
appears the form of an insulation trench in an active circuit. A section of the surrounding  
15 trench (a, b) of each island (A, B) forms a common piece with the trench of adjacent  
islands. The respective section has, in the inner islands, the width of the adjacent trench  
having the next larger or the next smaller measure of width in the row.

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